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**CERTIFICATE**

1260/00136

This certificate is issued in support of an application for Patent registration in a country outside New Zealand pursuant to the Patents Act 1953 and the Regulations thereunder.

I hereby certify that annexed is a true copy of the Provisional Specification as filed on 23 July 1999 with an application for Letters Patent number 336904 made by REPLICANT LIMITED.

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Dated 3 August 2000.

*Neville Harris*

Neville Harris  
Commissioner of Patents



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25 Patents Form No. 4

PATENTS ACT 1953

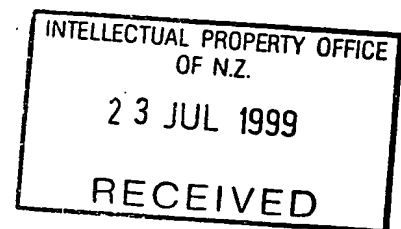
**PROVISIONAL SPECIFICATION**

30

**A FIBRESCOPE TRAINING MANNEQUIN**

We, **REPLICANT LIMITED**, of Unit 4, 131 Park Road, Miramar, Wellington, New Zealand

35 do hereby declare this invention to be described in the following statement:



**FIELD OF INVENTION**

The invention comprises a fibrescope training mannequin for use in training physicians in the use of fibrescope for laproscopy for example, or improving or  
5 maintaining physicians, skills of dexterity in the use of fibrescopes.

**BACKGROUND OF INVENTION**

10 A fibrescope comprises a length of optical fibre with a small "eye" lens at one end which is passed through the oral or nasal cavity and into a patient, and a larger viewing lens at the other end (or alternatively the fibrescope may be connected to a system for displaying the image on a VDU or similar). Physicians require training in the use and manipulation of fibrescopes. Physicians who use fibrescopes regularly may maintain ongoing dexterity but physicians who use fibrescopes less frequently  
15 may require practice to maintain their dexterity in the use of a fibrescope, from time to time. Insertion of a fibrescope requires that the eye end of the fibrescope is passed through the oral or nasal cavity and that as the fibrescope is slowly inserted further into the patient it is manipulated/twisted to thereby move and appropriately position the eye end of the fibrescope.

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**SUMMARY OF INVENTION**

The invention provides an improved or at least alternative form of fibrescope training mannequin.

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In broad terms the invention comprises a fibrescope training mannequin comprising mouth and/or nose apertures leading to a network of multiple pathways through which the fibrescope may be manipulated, formed by connection together of number of individual hollow branch components.

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Preferably at least some or all of the branch components are of a Y-configuration comprising an entry end and two or more exit ends, which may be connected together sequentially to form an expanding number of pathways in two or three dimensions.

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Optionally the mannequin also comprises a number of cap components connectable to close the exposed exit ends of the branch components. The branch components may also comprise other apertures into the branch components to which the cap components may be fitted.

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Preferably one or a number of predetermined symbols, objects or images is carried or inserted on each cap component.

### **BRIEF DESCRIPTION OF THE DRAWINGS**

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The invention will be further described with reference to the accompanying drawings by way of example and without intending to be limiting, which show a preferred form of fibrescope training mannequin of the invention. In the drawings:

15 Figure 1 is a perspective view of the preferred form fibrescope training mannequin open,

Figure 2 shows a single branch component of the preferred form mannequin and a cap component, and

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Figure 3 is a pathway "map" as will be referred to further.

### **DETAILED DESCRIPTION OF PREFERRED FORM**

25 The preferred form fibrescope training mannequin comprises a "head" section 1 and "body" section 2, comprising a chest lid 3. Apertures 4 and 5 in the head section 1 represent oral and nasal apertures in a patient, and lead to tube 6 extending into the mannequin from the head section 1 as shown.

30 A number of individual branch components are connected together as generally indicated at 7 in Figure 1, to form an expanding number of pathways from the tube 6, through which a user may practice in manipulating a fibrescope in training with the mannequin.

Figure 2 shows a single branch component which in the preferred form is of a general Y-configuration having a hollow interior and comprising an entry end 8 and exit ends 9. In making up a network of branch components, a first component is connected or plugged onto the tube 6 from the head section of the mannequin by pushing the entry end 8 of the first component over the tube 6, and then other similar branch components may be connected to each of the exit ends 9 of the first branch component, and again, to form a network of branch components providing an expanding number of pathways. The exit ends of the final branch components in the network may be closed by caps 10 as shown in Figure 2. Typically the branch components and caps will be formed from plastic by injection moulding. In the preferred form the branch components are a Y-configuration comprising one entry end 8 leading to two exit ends 9 but it is possible that the branch components could be in other configurations such as comprising a single entry end leading to three exit ends or two or more entry ends etc.

The branch components may be connected together to form an expanding number of pathways in two dimensions, for training in simple "left or right" manipulation of a fibrescope, or three dimensions for training in more complex manipulations of a fibrescope. Figure 3 shows a "map" of the pathways which may be used in training persons. A person may have the objective of manipulating the fibrescope through the mannequin to place the eye of the fibrescope at a predetermined point on the pathway "map" for example.

A predetermined symbol, object or image or a range of symbols, objects or images may be provided on the end 10a of the cap component which can be viewed through the fibrescope in use. Optionally the branch components may comprise additional apertures such as at 11 in Figure 2 to which cap components and components of various shapes may be fitted also carrying on the ends a predetermined symbol, object or image. A person training on the mannequin may have the objective of locating a particular object or image which can be viewed through the fibrescope, and manipulates the fibrescope to locate the correct object or image or one and then another object or image. The person may be able to view the object or image on a separate paper sheet or similar as well as through the fibrescope, to assist the person in becoming accustomed to the size of what is seen through the fibrescope relative to the actual size. The object or image may be incorporated into games.

The foregoing describes the invention including the preferred form thereof. Alterations and modifications as will be obvious to those skilled in the art are intended to be incorporated within the scope hereof.

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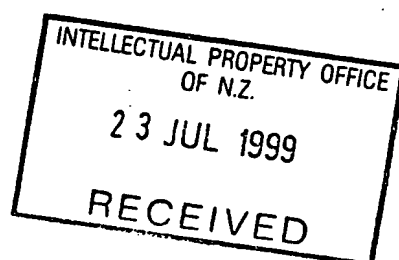
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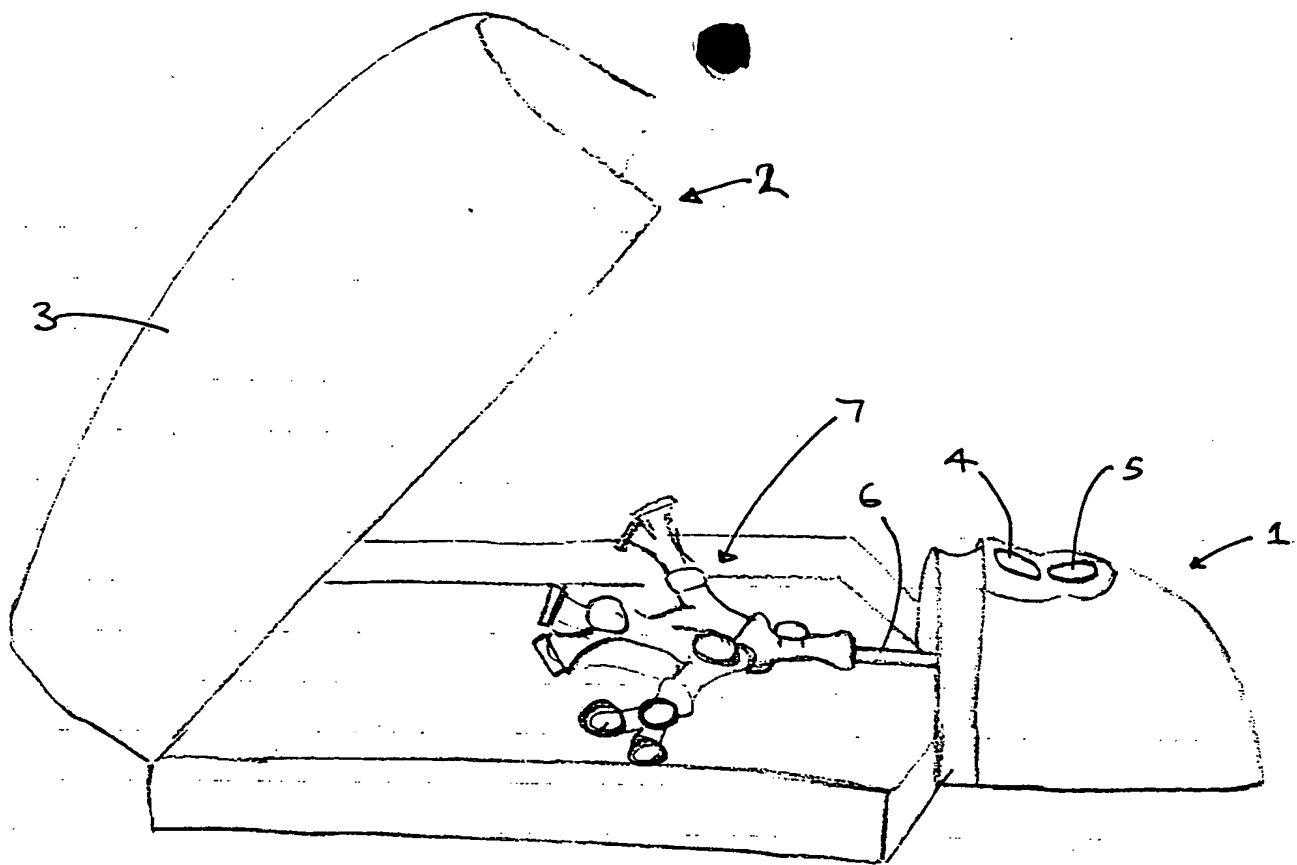


FIG 1

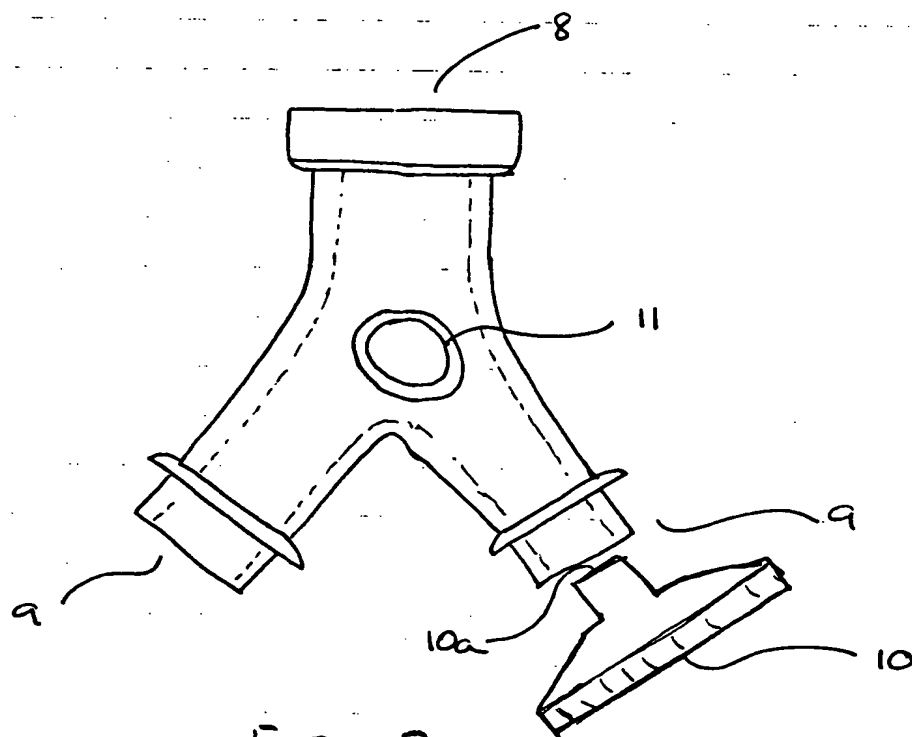


FIG 2

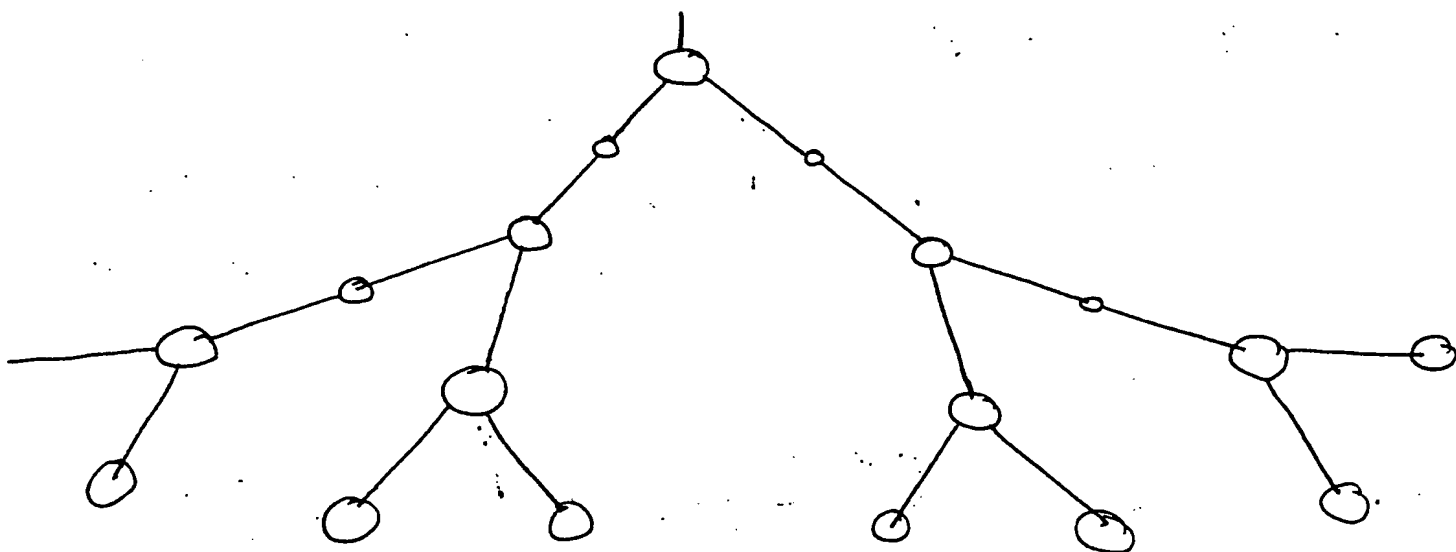


FIG 3